Applicant: Y. Okada, et al. U.S.S.N.: 10/624,935 Response to Office Action

Page 4 of 14

## Amendments to the Claims

This listing of claims will replace all prior versions, and listing, of claims in the application.

## **Listing of Claims:**

1. (Currently Amended) An active matrix type liquid crystal display apparatus comprising:

an insulation substrate;

scanning lines formed on the insulation substrate;

signal lines extending in a direction intersecting a direction in which the scanning lines extend;

switching devices provided in the vicinity of each intersection of the scanning and signal lines such that the switching devices are arrayed in a matrix form;

an interlaminar insulation film disposed on or above the scanning lines, the signal lines, and the switching devices; and

pixel electrodes formed on the interlaminar insulation film and arranged in a matrix form, each electrode being connected to an output terminal of an associated switching device,

wherein only a part of each of opposite side portions of one pixel electrode widthwise covers two signal lines extending adjacent to the pixel electrode; and

wherein each signal line is bent twice between two adjacent scanning lines such that two generally parallel but longitudinally displaced parts are formed, and these two parts are covered by opposed side portions of two adjacent pixel electrodes, respectively.

Applicant: Y. Okada, et al. U.S.S.N.: 10/624,935 Response to Office Action Page 5 of 14

2.	(Origina	<ol> <li>The active</li> </ol>	matrix type liqu	id crystal	display ap	paratus ac	cording to o	claim
1, wherein	n each pix	el electrode	covers the associ	ated switc	hing devi	ce.		

(

- 3. (Canceled)
- 4. (Canceled)

5. (Currently Amended) The active matrix type liquid crystal display apparatus
according to claim 4, An active matrix type liquid crystal display apparatus comprising:
an insulation substrate;
scanning lines formed on the insulation substrate;
signal lines extending in a direction intersecting a direction in which the scanning
lines extend;
switching devices provided in the vicinity of each intersection of the scanning and
signal lines such that the switching devices are arrayed in a matrix form;
an interlaminar insulation film disposed on or above the scanning lines, the signal
lines, and the switching devices;
pixel electrodes formed on the interlaminar insulation film and arranged in a
matrix form, each electrode being connected to an output terminal of an associated switching
device,
wherein only a part of each of opposite side portions of one pixel electrode
widthwise covers two signal lines extending adjacent to the pixel electrode;
wherein said parts of the pixel electrode covering the two signal lines adjacent to
the pixel electrode are parts that overhang from side edges of the pixel electrode; and

Applicant: Y. Okada, et al. U.S.S.N.: 10/624,935 Response to Office Action

Page 6 of 14

\_\_\_\_\_wherein both side edges of each pixel electrode are bent twice such that the overhanging parts are diagonally formed on the respective sides of the pixel electrode and these overhanging parts cover the two signal lines adjacent to the pixel electrode.

- 6. (Original) The active matrix type liquid crystal display apparatus according to claim 5, wherein a portion between the two bents of each side edge of the pixel electrode forms a slant.
- 7. (Original) The active matrix type liquid crystal display apparatus according to claim 1, wherein each switching device is disposed in the vicinity of a gap between two adjacent pixel electrodes.
- 8. (Original) The active matrix type liquid crystal display apparatus according to claim 1, further comprising an opposed board having a black matrix, and wherein the black matrix is located between two adjacent pixel electrodes in such a manner that the black matrix overlaps each one of these pixel electrodes by at least an amount corresponding to an alignment margin of the opposed board relative to the insulation board.
- 9. (Original) The active matrix type liquid crystal display apparatus according to claim 8, wherein in a location where the signal line is covered by the pixel electrode, an edge of the black matrix is disposed along a center line of the pixel electrode or on an inner side of the pixel electrode than the center line.
- 10. (Original) The active matrix type liquid crystal display apparatus according to claim 1, further comprising a light shield film provided on the insulation substrate in such a manner that the light shield film spans a gap between the adjacent pixel electrodes.

Applicant: Y. Okada, et al. U.S.S.N.: 10/624,935 Response to Office Action

Page 7 of 14

11. (Original) The active matrix type liquid crystal display apparatus according to claim 9, further comprising a light shield film provided on the insulation substrate in such a manner that the light shield film spans a gap between the adjacent pixel electrodes.

12. (Original) An active matrix type liquid crystal display apparatus comprising:

an insulation substrate;

scanning lines formed on the insulation substrate;

auxiliary capacitor lines arranged parallel to the scanning lines;

signal lines extending in a direction intersecting a direction in which the scanning lines extend;

switching devices provided in the vicinity of each intersection of the scanning and signal lines such that the switching devices are arrayed in a matrix form;

an interlaminar insulation film disposed on or above the scanning lines, auxiliary capacitor lines, the signal lines, and the switching devices; and

pixel electrodes formed on the interlaminar insulation film and arranged in a matrix form, each electrode being connected to an output terminal of the associated switching device,

wherein both side edges of each pixel electrode are bent twice such that the overhanging parts are formed on the respective sides of the pixel electrode and these overhanging parts cover two signal lines adjacent to the pixel electrode, and

wherein the auxiliary capacitor line underlies a portion between the two bents of each side edge of the pixel electrode.

Applicant: Y. Okada, et al.

U.S.S.N.: 10/624,935

Response to Office Action

Page 8 of 14

13. (Original) The active matrix type liquid crystal display apparatus according to claim

12, further comprising a light shield film provided on the insulation substrate in such a manner

that the light shield film spans a gap between the adjacent pixel electrodes.

14. (Original) The active matrix type liquid crystal display apparatus according to claim

13, wherein said light shield film is electrically connected to either the auxiliary capacitor line or

the scanning line.

15. (Original) The active matrix type liquid crystal display apparatus according to claim

12, wherein the portion between the two bents of each side edge of the pixel electrode forms a

slant.

16. (Original) The active matrix type liquid crystal display apparatus according to claim

12,

wherein the auxiliary capacitor line includes electrode portions that extend toward

a portion between the two bents of each side edge of the pixel electrode such that the electrode

portions underlie the portions between the two bents of each side edge of the pixel electrode.

17. (Original) The active matrix type liquid crystal display apparatus according to claim

12, wherein the overhanging parts on both sides of the pixel electrodes have approximately same

dimensions.

Claims 18. -23 (CANCELLED)

Applicant: Y. Okada, et al.

U.S.S.N.: 10/624,935

Response to Office Action

Page 9 of 14

24. (New) An active matrix type liquid crystal display apparatus comprising:

an insulation substrate;

scanning lines formed on the insulation substrate;

signal lines extending in a direction intersecting a direction in which the scanning lines extend;

switching devices provided in the vicinity of each intersection of the scanning and signal lines such that the switching devices are arrayed in a matrix form;

an interlaminar insulation film disposed on or above the scanning lines, auxiliary capacitor lines, the signal lines, and the switching devices;

pixel electrodes formed on the interlaminar insulation film and arranged in a matrix form, each electrode being connected to an output terminal of the associated switching device;

wherein between two adjacent scanning lines, each signal line has a first and second generally parallel but longitudinally displaced straight portions and a transition portion connecting the first and second straight portions;

wherein each pixel electrode has a shape of a rectangle that has two side portions extending along the first and second straight portions of neighboring two signal lines; and

wherein one of the two sides of each pixel electrode covers the first portion of one of the two neighboring two signal lines, and the other side portion of the pixel electrode covers the second portion of the other of the two neighboring two signal lines.